

What is claimed is:

1. An authentication apparatus for authenticating a specific object as a target, comprising:
 - a target information obtainment unit operable to obtain first
 - 5 target information that characterizes the object from said object;
 - a target information authentication unit operable to authenticate the object based on the obtained first target information;
 - a location information obtainment unit operable to obtain
 - 10 location information showing a location where the object exists; and
 - a location information addition unit operable to associate the obtained location information with the first target information concerning the object who is authenticated.
- 15 2. An authentication apparatus for authenticating validity and an existence of a specific object as a target, comprising:
 - a target information obtainment unit operable to obtain target information that characterizes the object;
 - a location information obtainment unit operable to obtain
 - 20 location information showing a location where the object exists;
 - a target information authentication unit operable to authenticate the object based on the obtained target information;
 - a location information authentication unit operable to authenticate the location where the object exists based on the
 - 25 obtained location information; and
 - an existence authentication unit operable to authenticate the existence of the object when the object is authenticated and the location information is authenticated.
- 30 3. The authentication apparatus according to Claim 1 or Claim 2, further comprising:
 - a first storage unit operable to store second target

information for authenticating the specific object in advance; and

wherein, when the first target information concerning the specific object is obtained, the target information authentication unit reads out the second target information concerning the object from the first storage unit and checks the second target information concerned and the first target information obtained, and the target information authentication unit authenticates the specific object when the first target information matches the second target information.

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4. The authentication apparatus according to Claim 3, wherein the specific object is a specific person.

5. The authentication apparatus according to Claim 4,

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wherein the target information obtainment unit obtains at least a piece of information as the first target information out of target information showing a password, biometrix authentication information, a fingerprint, a voice print, a facial appearance, a retina, a shape of a palm, handwriting, a vein pattern on a back of a hand and an iris capable of identifying the specific person.

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6. The authentication apparatus according to Claim 3, wherein the specific object is an item which is owned by a specific person or the person concerned.

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7. The authentication apparatus according to Claim 6,

wherein the target information obtainment unit obtains at least a piece of information as the first target information out of information showing a password, biometrix authentication information, a fingerprint, a voice print, a facial appearance, a retina, a shape of a palm, handwriting, a vein pattern on a back of a hand and an iris capable of identifying the specific person, and

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obtain at least a piece of information out of information showing an identification code that characterizes an item and an appearance of the item.

5 8. The authentication apparatus according to Claim 3,
 wherein the location information obtainment unit obtains
location information of a location where the object exists using a
Global Positioning System.

10 9. The authentication apparatus according to Claim 3,
 wherein the location information obtainment unit obtains
location information of a location where the object exists from a
base station of a Personal Handyphone System or a cellular phone
system.

15 10. The authentication apparatus according to Claim 3,
 wherein the location information obtainment unit further
obtains time information showing time when the object exists from
a radiocontrolled clock system.

20 11. The authentication apparatus according to Claim 3, further
 comprising a built-in clock capable of checking predetermined
reference time or standard time, and
 wherein a location information obtainment unit further
25 obtains time information showing time when the object exists from
the clock.

12. The authentication apparatus according to Claim 11, further
comprising:
30 a time information authentication unit operable to
authenticate time when the object exists based on the obtained time
information; and

wherein the existence authentication unit further authenticates the object existing at the authenticated time.

13. The authentication apparatus according to Claim 12, further comprising:

a second storage unit operable to store in advance second target information that characterizes the specific object, and location information and time information showing a location and time after a transfer in the case where the object concerned is transferred according to a predetermined schedule; and

wherein the target information authentication unit reads out the second target information concerning the specific object from the second storage unit, checks the read-out second target information and the obtained first target information, and authenticates the specific object when the first target information matches the second target information,

the location information authentication unit reads out the location information after a transfer concerning the specific object from the second storage unit, checks the read-out location information and the obtained location information, and authenticates a location where the specific object exists in the case where the read-out location information matches the obtained location information; and

the time information authentication unit reads out time information concerning time after a transfer concerning the specific object, compares the read-out time information and the obtained time information, and authenticates time when the specific object exists in the case where the two pieces of time information belong to the same time period.

14. An authentication system comprising:
an authentication server for authenticating validity and an

existence of an object as a target, the object being at least one of a specific person and a specific item; and

an authentication terminal connected to the authentication server via a network; and

5 wherein the authentication terminal includes:

a target information obtainment unit operable to obtain target information that characterizes said object from the object,

a location information obtainment unit operable to obtain location information showing a location where the object exists, and

10 a sending unit operable to send the obtained target information and the obtained location information to the authentication server, and

the authentication server includes:

15 a receiving unit operable to receive the target information and the location information from the authentication terminal,

a target information authentication unit operable to authenticate the object based on the received target information,

20 a location information authentication unit operable to authenticate a location where the object exists based on the received location information, and

an existence authentication unit operable to authenticate the existence of the object when the object is authenticated and the location information is authenticated.

25 15. The authentication system according to Claim 14,

wherein the target information obtainment unit of the authentication terminal obtains at least a piece of information out of information showing a password, biometrix authentication information, a fingerprint, a voice print, a facial appearance, a
30 retina, a shape of a palm, handwriting, a vein pattern on a back of a hand and an iris capable of identifying the specific person, as the target information and obtains at least a piece of information out of

information showing identification code capable of identifying an item and an appearance of the item.

16. The authentication system according to Claim 14,

5 wherein the location information obtainment unit of the authentication terminal obtains location information of a location where the object exists from a base station of a Personal Handyphone System or of a cellular phone system.

10 17. The authentication system according to Claim 14,

wherein the location information obtainment unit of the authentication terminal obtains location information of a location where the object exists using a Global Positioning System.

15 18. The authentication system according to Claim 17,

wherein the authentication terminal further includes a time information obtainment unit operable to obtain time information showing time when the object exists,

the sending unit sends the obtained time information to the authentication server,

20 the receiving unit of the authentication server further receives time information from the authentication terminal,

the authentication server further includes a time information authentication unit operable to authenticate time when the object exists based on the received time information, and

25 the existence authentication unit of the authentication server further authenticates the object existing at the authenticated time.

19. The authentication system according to Claim 18,

30 wherein the time information authentication unit of the authentication server further obtains time information from a radiocontrolled system, and authenticates time when the object

exists based on the time information concerned and the received time information.

20. The authentication system according to Claim 18,

5 wherein the authentication server has a built-in clock capable of checking predetermined reference time or standard time, and the time information authentication unit further authenticates time when the object exists based on the time information of the built-in clock and the received time information.

10 21. The authentication system according to Claim 20,

wherein the authentication server further includes:

a storage unit operable to store in advance location information and time information showing a location after a transfer and time in the case where the object concerned is transferred according to a predetermined schedule based on target information that characterizes the specific object, and

in the authentication server,

20 the target information authentication unit reads out target information concerning the specific object from the storage unit, checks the read-out target information concerned and the received target information, and authenticates the specific object being right when the read-out target information matches the received target information,

25 the location information authentication unit reads out the location information after a transfer concerning the specific object from the storage unit, checks the read-out location information concerned and the received location information, and authenticates time when the specific object exists in the case where the two pieces of time information belong to the same time period, and

30 the time information authentication unit reads out time information after a transfer concerning the specific object from the

storage unit, compares the read-out time information concerned and the received time information, and authenticates a location where the specific object exists in the case where the two pieces of time information belong to the same time period.

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22. The authentication system according to Claim 21,
wherein the sending unit of the authentication terminal further adds information that makes it possible to identify an authentication terminal to the target information and the location
10 information and sends the information to the authentication server, and

the receiving unit of the authentication server further checks whether information that makes it possible to identify the received authentication terminal or not, and handles the received target
15 information and location information as effective information when the two pieces of information are judged to be right.

23. The authentication system according to Claim 22,
wherein the authentication server further includes:

20 a warning sending unit operable to send information showing a predetermined warning to the authentication terminal concerned when information that makes it possible to identify the received authentication terminal is judged to be wrong, and

the authentication terminal further includes:

25 a warning receiving unit that receives information showing the warning from the authentication server and represents the contents of the information concerned.

24. The authentication system according to Claim 22,

30 wherein a sending unit of the authentication terminal further encrypts the target information and the location information, and sends the two pieces of information to the authentication server, and

the receiving unit of the authentication server further decrypts encrypted target information and location information that are received from the authentication terminal.

5 25. The authentication system according to Claim 22,
 wherein the authentication server further updates
information that makes it possible to identify the authentication
terminal and notifies the information to the authentication terminal
based on the predetermined rule, and
10 the authentication terminal further updates information that
makes it possible to identify the authentication terminal in response
to a notification from the authentication server based on a
predetermined rule.

15 26. A lock management system comprising:
 a management server that controls a lock of a predetermined
facility by grasping validity of a specific worker and a location where
the worker exists; and
 a worker terminal connected to the management server via a
20 network; and
 wherein the worker terminal includes:
 a target information obtainment unit operable to obtain
target information that characterizes the worker concerned from the
worker,
25 a location information obtainment unit operable to obtain
location information showing a location where the worker exists,
and
 a sending unit operable to send the obtained target
information and the location information to the management server,
30 and
 the management server includes:
 a receiving unit operable to receive the target information

and the location information from the worker terminal,

a target information authentication unit operable to authenticate the worker based on the received target information, and

5 a location information judgment unit operable to judge whether a location where the worker exists is a safe location based on the received location information,

wherein the predetermined facility is locked when the worker is authenticated and it is judged that a location of the worker is a
10 safe location.

27. A traveling management system comprising:

a management server that manages traveling to a predetermined visiting destination by grasping validity of a specific
15 worker; and

a location and time where and when the worker concerned exists, and a worker terminal connected to the management server concerned via a network;

wherein the worker terminal includes:

20 a target information obtainment unit operable to obtain target information that characterizes the worker concerned from the worker,

a location information obtainment unit operable to obtain location information showing a location where the worker exists,

25 a time information obtainment unit operable to obtain time information showing time when the worker exists, and

a sending unit operable to send the obtained target information, the obtained location information and the obtained time information to the management server, and

30 the management server includes:

a receiving unit operable to receive the target information, the location information and the time information from a worker

terminal,

a target information authentication unit operable to authenticate the worker based on the received target information,

5 a location information judgment unit operable to judge whether a location where the worker exists is right visiting destination or not based on the received location information,

a time information judgment unit operable to judge whether time when the worker exists is right based on the received time information, and

10 the traveling is judged to be right when the worker is authenticated and a location of the worker and time are judged to be a right location and time.

28. An authentication method for authenticating a specific object as a target, comprising:

a target information obtainment step of obtaining a first target information that characterizes the object concerned from the object;

20 a target information authentication step of authenticating the object based on the obtained target information; and

a location information addition step of associating the location information with the target information by obtaining location information showing a location where an object who is authenticated exists.

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29. An authentication method for authenticating validity and existence of an object regarding a specific object as a target, comprising:

30 a target information obtainment step of obtaining target information that characterizes the object;

a location information obtainment step of obtaining location information showing a location where the object exists;

a target information authentication step of authenticating the object based on the obtained target information;

a location information authentication step of authenticating a location where an object exists based on the obtained location
5 information; and

an existence authentication step of authenticating the object existing when the object and the location information are authenticated.

10 30. A program for an authentication apparatus for authenticating a specific object as a target, the program comprising:

a target information obtainment step of obtaining a first target information that characterizes the object concerned from the object;

15 a target information authentication step of authenticating the object based on the obtained target information; and

a location information addition step of associating the location information with the target information by obtaining location information showing a location where an object who is
20 authenticated exists.

31. A program for an authentication apparatus for authenticating validity and existence of the object concerned regarding a specific object as a target, comprising:

25 a target information obtainment step of obtaining target information that characterizes the object;

a location information obtainment step of obtaining location information showing a location where the object exists;

a target information authentication step of authenticating the
30 object based on the obtained target information;

a location information authentication step of authenticating a location where the object exists based on the obtained location

information; and

an existence authentication step of authenticating the object existing when the object is authenticated and the location information is authenticated.

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